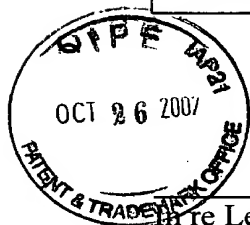


Docket No.: GMI-056
(PATENT)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Here Letters Patent of:
Longberg *et al.*

Patent No.: 7,084,260

Issued: August 1, 2007

For: TRANSGENIC NON-HUMAN AMINALS FOR
PRODUCING HETEROLOGOUS
ANTIBODIES

Attention: Office of Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

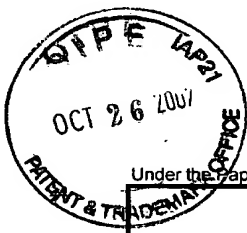
RESPONSE TO LETTER REGARDING OF PATENT TERM ADJUSTMENT

Dear Sir:

This communication is in response to the Letter Regarding Patent Term Adjustment and Notice of Intent to Issue Certificate of Correction mailed September 20, 2007 from the U.S. Patent and Trademark Office. Specifically, Patentees respectfully maintain that for the following reason that they are entitled to 551 days of PTA instead of the 487 days granted in the Letter.

A period of reduction in the Patent Term Adjustment was entered by the Office in association with the filing of a REQUEST FOR ACKNOWLEDGEMENT OF PREVIOUSLY SUBMITTED INFORMATION DISCLOSURE STATEMENT filed October 25, 2005 (resubmitted December 19, 2005). The reduction reflects a period of 64 days beginning with receipt of the REQUEST by the Office (October 28, 2005) and ending on the day the REQUEST was considered by the Examiner (December 30, 2005). However, because the resubmission was not due to Patentees fault or delay, and because Patentees were in fact making reasonable efforts to conclude the processing and examination of the application during prosecution, the 64 days should not be counted against Patentees' PTA. Specifically, Patentees previously submitted the

10-29-07

CDA
IFW

PTO/SB/21 (10-07)

Approved for use through 10/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM <small>(to be used for all correspondence after initial filing)</small>	Application Number	Patent#: 7,084,260
	Filing Date	Issued: August 1, 2006
	First Named Inventor	Nils LONBERG
	Art Unit	1644
	Examiner Name	P. J. Nolan
Total Number of Pages in This Submission	Attorney Docket Number	GMI-056

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Exhibit A (15 pages) Exhibit B (2 pages) Return Receipt Postcard
<div style="border: 1px solid black; padding: 5px; min-height: 40px;"> Remarks </div>		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	LAHIVE & COCKFIELD, LLP		
Signature			
Printed name	Jeanne M. DiGiorgio		
Date	October 26, 2007	Reg. No.	41,710

same Information Disclosure Statement on two separate occasions earlier in the prosecution of the patent. However, in both instances and for no apparent reason, the Information Disclosure Statement submitted was not reviewed or acknowledged by the Examiner. In particular, the Information Disclosure Statement filed October 25, 2005 was initially submitted by Patentees on January 24, 1997 and received by the Office on January 28, 1997. (See enclosed Exhibit A, which includes a copy of the Information Disclosure Statement, Form-PTO 1449 and Return Receipt postcard date stamped by the Office on January 28, 1997.) The same Information Disclosure Statement was again submitted by patentees on March 9, 2001 and received by the Office on March 15, 2001 (See Exhibit B, which includes a copy of the Return Receipt Postcard and the Transmittal form for the submission). For no apparent reason, neither Information Disclosure Statement was reviewed by the Examiner.

Therefore, because Patentees' made reasonable efforts to conclude processing and examination of the instant patent through multiple submissions of the same Information Disclosure Statement for the Examiner's consideration early the prosecution, they should not be penalized for the delay associated with the resubmission. Accordingly, Patentees respectfully request that the Office reinstate the period of reduction of 64 days and issue a certificate of correction showing a revised Patent Term Adjustment of 551 days instead of 487 days.

Dated: October 26, 2007

Respectfully submitted,

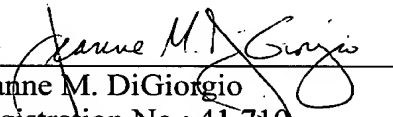
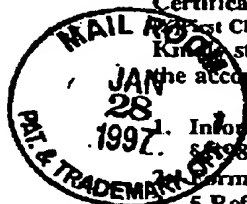
By 
Jeanne M. DiGiorgio
Registration No.: 41,710
LAHIVE & COCKFIELD, LLP
One Post Office Square
Boston, Massachusetts 02109-2127
(617) 227-7400
(617) 742-4214 (Fax)
Attorney/Agent For Applicant

Exhibit A**COPY**APPLICANT L. S. LONBERG et al.Title: **TRANSGENIC NON-HUMAN ANIMALS FOR
PRODUCING HETEROLOGOUS ANTIBODIES**

Serial No: 08/728,463 Filed: October 10, 1995

Fee (if any) \$0.00 Check Enclosed ☐ Yes ☒ No

Certificate of Mailing:

Post Class ☐ Express Mail label ☐ Know stamp receipt date and mail to acknowledge receipt of
the accompanying:1. Information Disclosure Statement Under 37 CFR §1.97 and
§1.98

2. Form PTO-1449 listing references A1-C101

3. 5 References

4. Postcard

Due Date: Date Mailed: 1/24/97Atty/Secy RTA/dmvFile No.: 014643-009020US

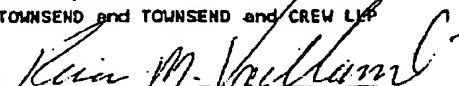
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231,

on

1/24/97

TOWNSEND and TOWNSEND and CREW LLP

By

**COPY**PATENT

Attorney Docket No. 014643-009020US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

NILS LONBERG et al.

Application No.: 08/728,463

Filed: 10 October, 1996

For: TRANSGENIC NON-HUMAN
ANIMALS FOR PRODUCING
HETEROLOGOUS ANTIBODIES

Examiner: UNASSIGNED

Art Unit: UNASSIGNED

INFORMATION DISCLOSURE
STATEMENT UNDER
37 CFR §1.97 and §1.98Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The disclosures cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of some of the disclosures (references A1-C96) are not being provided pursuant to 37 C.F.R. 1.98(d), as those disclosures have been previously cited by or submitted to the Patent Office in prior applications Serial Nos. 07/810,279, 07/853,408, 08/161,739, 08/165,699, 08/096,762, 08/352,322, and 08/209,741, to which the above identified application claims priority.

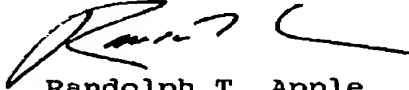
This information disclosure statement is being filed before the mailing date of the first office action on the merits.

Niels LONGBERG et al.
Application No.: 08/728,463
Page 2

PATENT

It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the disclosures be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Respectfully submitted,



Randolph T. Apple
Reg. No. 36,429

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FORM PTO-1449 (Modified,

Attorney Docket No.
14643-009000Serial No.
08/352,322LIST OF PATENTS AND PUBLICATIONS
FOR APPLICANT'S INFORMATION
DISCLOSURE STATEMENT
(Use Several Sheets if Necessary)Applicant
NILS LONBERG and ROBERT M. KAY

PAGE 1 OF 12

Filing Date
December 7, 1994Group
1804

Reference Designation

U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Subcl:	File Date If Approp
_____	A1	4,204,244	04/20/93	Fell et al.	435	
_____	A2	5,175,384	12/29/92	Krimpenfort	800	
_____	A3	5,434,340	07/18/95	Krimpenfort	800	

COPY

FOREIGN PATENT DOCUMENTS

Document No.	Date	Country	Class	Subcl:	Trans. Yes No
_____ B1	EP 0 315 062	05/10/89	EP		
_____ B2	WO 90/04036	04/19/90	PCT		
_____ B3	WO 90/12878	11/01/90	PCT		
_____ B4	WO 92/03918	03/19/92	PCT		
_____ B5	WO 91/10741	07/25/91	PCT		
_____ B6	WO 91/00906	01/24/91	PCT		

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

_____ C1	Alt et al., Immunoglobulin genes in transgenic mice, TIG - August 1985
_____ C2	Berman et. al., Content and organization of the human Ig V _H locus: definition of three new V _H families and linkage to the Ig C _H locus, The EMBO J. 7:727-738 (1988)
_____ C3	Berton et. al., Synthesis of germ-line γ 1 immunoglobulin heavy-chain transcripts in resting B cells: Induction by interleukin 4 and inhibition by interferon γ , Proc. Natl. Acad. Sci. (U.S.A) 86:2829-2833 (1989)
_____ C4	Bollag et al., Homologous recombination in mammalian cells, Annu. Rev. Genet. 23:199-225 (1989)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified)

LIST OF PATENTS AND PUBLICATIONS
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14643-009000Serial No.
08/352,322Applicant
NILS LONBERG and ROBERT M. KAYFiling Date
December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- _____ C5 Bruggemann et al., Human antibody production in transgenic mice: expression from 100 kb of the human IgH locus, Eur. J. Immunol. 21:1323-1326 (1991)
- _____ C5(i) Bruggemann et al., A repertoire of monoclonal antibodies with human heavy chains from transgenic mice, Proc. Natl. Acad. Sci. USA 86:6709-6713 (1989)
- _____ C6 Bucchini et al., Rearrangement of a chicken immunoglobulin gene occurs in the lymphoid lineage of transgenic mice, Nature 326:409-411 (1987)
- _____ C7 Capecchi, The new mouse genetics: Altering the genome by gene targeting, TIG 5:70-76 (1989)
- _____ C8 Capecchi, Altering the genome by homologous recombination, Science 244:1288-1292 (1989)
- _____ C9 Coffman et. al., T cell activity that enhances polyclonal IgE production and its inhibition by interferon- γ , J. Immunol. 136:949-954 (1986)
- _____ C10 Coffman et al., A mouse T cell product that preferentially enhances IgA production, J. Immunol. 139:3685-3690 (1987)
- _____ C11 Doetschman et al., Targetted correction of a mutant HPRT gene in mouse embryonic stem cells, Nature 330:576-578 (1987)
- _____ C12 Durdik et al., Isotype switching by a microinjected μ immunoglobulin heavy chain gene in transgenic mice, Proc. Natl. Acad. Sci. USA 86:2346-2350 (1989)
- _____ C13 Esser and Radbruch, Rapid induction of transcription of unrearranged S γ 1 switch regions in activated murine B cells by interleukin 4, The EMBO J. 8:483-488 (1989)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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08/352,322Applicant
NILS LONBERG and ROBERT M. KAYFiling Date
December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- _____ C13(i) Ferrier et al., Separate elements control DJ and VDJ rearrangement in a transgenic recombination substrate, The EMBO J. 9:117-125 (1990)
- _____ C14 Forni, extensive splenic B cell activation in IgM-transgenic mice, Eur. J. Immunol. 20:983-989 (1990)
- _____ C15 Gerstein et al., Isotype switching of an immunoglobulin heavy chain transgene occurs by dna recombination between different chromosomes, Cell 63:537-548 (1990)
- _____ C16 Goodhardt et al., Rearrangement and expression of rabbit immunoglobulin κ light chain gene in transgenic mice, Proc. Natl. Acad. Sci. (U.S.A.) 84:4229-4233 (1987)
- _____ C17 Gordon, Transgenic mice in immunology, The Mount Sinai Journal of Medicine 53:223-231 (1986)
- _____ C18 Hagman et al., Inhibition of immunoglobulin gene rearrangement by the expression of a $\lambda 2$ transgene, J. Exp. Med. 169:1911-1929 (1989)
- _____ C19 Ichihard et al., Organization of human immunoglobulin heavy chain diversity gene loci, The EMBO J. 7:4141-4150 (1988)
- _____ C20 Iglesias et al., Expression of immunoglobulin delta chain causes allelic exclusion in transgenic mice, Nature 330:482-484 (1987)
- _____ C21 James and Bell, Human monoclonal antibody production current status and future prospects, J. of Immunol. Methods 100:5-40 (1987)
- _____ C22 Jasin and Berg, Homologous integration in mammalian cells without target gene selection, Genes & Development 2:1353-1363 (1988)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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PAGE 4 OF 11

Filing Date
December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- _____ C23 Kenny et al., Alternation of the B cell surface phenotype, immune response to phosphocholine and the B cell repertoire in M167 α plus κ transgenic mice, J. of Immunol. 142:4466-4474 (1989)
- _____ C22(i) Jung et al., Shutdown of class switching recombination by deletion of a switch region control element, Science 259:984-987 (1993)
- _____ C24 Kitamura et al., A B cell-deficient mouse by targeted disruption of the membrane exon of the immunoglobulin μ chain gene, Nature 350:423-426 (1991)
- _____ C25 Koller and Smithies, Inactivating the β_2 -microglobulin locus in mouse embryonic stem cells by homologous recombination, Proc. Natl. Acad. Sci. USA 86:8932-8935 (1989)
- _____ C26 Lin et al., Recombination in mouse L cells between DNA introduced into cells and homologous chromosomal sequences, Proc. Natl. Acad. Sci. USA 82:1391-1395 (1985)
- _____ C27 Linton et al., Primary antibody-forming cells secondary B cells are generated from separate precursor cell subpopulations, Cell 59:1049-1059 (1989)
- _____ C28 Lo et al., Expression of mouse IgA by transgenic mice, pigs and sheep, Eur. J. Immunol. 21:1001-1006 (1991)
- _____ C29 Lorenz et al., Physical map of the human immunoglobulin k locus and its implications for the mechanisms of V_K - J_K rearrangement, Nucl. Acids Res. 15:9667-9676 (1987)
- _____ C30 Lutzker and Alt, Structure and expression of germ line immunoglobulin $\gamma 2b$ transcripts, Mol. Cell Biol. 8:1849-1852 (1988)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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NILS LONBERG and ROBERT M. KAY

PAGE 5 OF 11

Filing Date
December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- _____ C31 Mansour et al., Disruption of the proto-oncogene int-2 in mouse embryo-derived stem cells: a general strategy for targeting mutations to non-selectable genes, Nature 336:348-352 (1988)
- _____ C32 Mills et.al., Sequences of human immunoglobulin switch regions: implications for recombination and transcription, Nucl. Acids. Res. 18:7305-7316 (1991)
- _____ C34 Mills et al., DNase I hypersensitive sites in the chromatin of human μ immunoglobulin heavy-chain genes, Nature 306:809-812 (1983)
- _____ C35 Mowatt et. al., DNA sequence of the murine γ 1 switch segment reveals novel structural elements, J.Immunol. 136:2674-2683 (1986)
- _____ C36 Muller et al., Membrane-bound IgM Obstructs B cell development in transgenic mice, Eur. J. Immunol. 19:923-928 (1989)
- _____ C37 Murray & Szostak, Construction of artificial chromosomes in yeast, Nature 305:189-193 (1983)
- _____ C38 Neuberger et al., Isotype exclusion and transgene down-regulation in immunoglobulin- λ transgenic mice, Nature 338:350-352 (1989)
- _____ C39 Nikaido et al., Nucleotide sequences of switch regions of immunoglobulin C and C genes and their comparison, J. Biol. Chem. 257:7322-7329 (1982)
- _____ C40 Nikaido et al., Switch region of immunoglobulin C μ gene is composed of simple tandem repetitive sequences, Nature 292:845-848 (1981)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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NILS LONBERG and ROBERT M. KAY

PAGE 6 OF 11

Filing Date
December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- _____ C41 Nussenzweig et al., A human immunoglobulin gene reduces the incidence of lymphomas in c-Myc-bearing transgenic mice, Nature 336:446-450 (1988)
- _____ C41(i) Nussenzweig et al., Allelic exclusion in transgenic mice carrying mutant human IgM genes J. Exp. Med. 167:1969 (1988)
- _____ C42 Oettinger et al., RAG-1 and RAG-2, adjacent genes that synergistically activate V(D)J recombination, Science 248:1517-1523 (1990)
- _____ C43 Petters, transgenic mice in immunological research, Vet. Immunol. Immunopath. 17:267-278 (1987)
- _____ C44 Rabbits et. al., Human immunoglobulin heavy chain genes: evolutionary comparisons of C μ , C δ and C γ genes and associated switch sequences, Nucl. Acids Res. 9:4509-4524 (1981)
- _____ C45 Rath et al., Quantitative analysis of idiotypic mimicry and allelic exclusion in mice with a μ Ig Transgene, J. of Immunol. 143:2074-2080 (1989)
- _____ C46 Rath et al., B cell abnormalities induced by a μ ig transgene extend to L chain isotype usage, J. of Immunol. 146:2841 (1991)
- _____ C47 Ravetch et al., Evolutionary approach to the question of immunoglobulin heavy chain switching: Evidence from cloned human and mouse genes, Proc. Natl. Acad. Sci. (U.S.A.) 77:6734-6738 (1980)
- _____ C48 Reid et al., A single DNA response element can confer inducibility by both α - and γ -interferons, Proc. Natl. Acad. Sci. (U.S.A.) 86:840-844 (1989)
- _____ C49 Ritchie et al., Allelic exclusion and control of endogenous immunoglobulin gene rearrangement in κ transgenic mice, Nature 312:517-520 (1984)

EXAMINERDATE CONSIDERED

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PAGE 7 OF 11

Filing Date
December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- C50. Rothman et al., Structure and expression of germline immunoglobulin $\gamma 3$ heavy chain gene transcripts: implications for mitogen and lymphokine directed class-switching, Intl. Immunol. 2:621-627 (1990)
- C51. Rusconi et al., Transmission and expression of a specific pair of rearranged immunoglobulin μ and κ genes in a transgenic mouse line, Nature 314:330-334 (1985)
- C52. Sato et al., Physical linkage of a variable region segment and the joining region segment of the human immunoglobulin heavy chain locus, Biochem. Biophys. Res. Comm. 154:264-271 (1988)
- C53. Sevidy and Sharp, Positive genetic selection for gene disruption in mammalian cells by homologous recombination, Proc. Natl. Acad. Sci. USA 86:227-231 (1989)
- C54. Shimizu et al., Trans-splicing as a possible molecular mechanism for the multiple isotype expression of the immunoglobulin gene, J. Exp. Med. 173:1385-1393 (1991)
- C55. Shimizu et al., Immunoglobulin double-isotype expression by trans-mRNA in a human immunoglobulin transgenic mouse, Proc. Natl. Acad. Sci. USA 86:8020-8023 (1989)
- C56. Sideras et al., Production of sterile transcripts of $C\gamma$ genes in an IgM-producing human neoplastic B cell line that switches to IgG-producing cells, Intl. Immunol. 1: 631-642 (1989)
- C57. Siebenlist et al., Human immunoglobulin D segments encoded in tandem multigenic families, Nature 294:631-635 (1981)
- C58. Smithies et al., Insertion of DNA sequences into the human chromosomal β -globulin locus by homologous recombination, Nature 317:230-234 (1985)

EXAMINER

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December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- _____ C59 Snapper et. al., Interferon- γ and B cell stimulatory factor-1 reciprocally regulate Ig isotype production, Science 236:944-947 (1987)
- _____ C60 Song et al., Accurate modification of a chromosomal plasmid by homologous recombination in human cells, Proc. Natl. Acad. Sci. USA 84:6820-6824 (1987)
- _____ C61 Soriano et al., Targeted disruption of the c-src proto-oncogene leads to osteopetrosis in mice, Cell 64:693-702 (1991)
- _____ C62 Stavnezer et al., Immunoglobulin heavy-chain switching may be directed by prior induction of transcripts from constant-region genes, Proc. Natl. Acad. Sci. (U.S.A.) 85:7704-7708 (1988)
- _____ C63 Storb, Immunoglobulin gene analysis in transgenic mice, in Immunoglobulin Genes, Academic Press Limited, pp. 303-326 (1989)
- _____ C64 Storb et al., Expression, allelic exclusion and somatic mutation of mouse immunoglobulin kappa genes, Immunological Reviews 89:85-102 (1986)
- _____ C65 Szurek et al., Complete nucleotide sequence of the murine $\gamma 3$ switch region and analysis of switch recombination in two $\gamma 3$ -expressing hybridomas, J. Immunol. 135:620-626 (1985)
- _____ C66 Tahara et al., HLA antibody responses in HLA class I transgenic mice, Immunogenetics 32:351-360 (1990)
- _____ C67 Taussig et al., Regulation of immunoglobulin gene rearrangement and expresion, immunology today 10:143-146 (1989)

EXAMINER

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PAGE 9 OF 11

Filing Date
December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- _____ C68 Thomas and Capecchi, Site-directed mutagenesis by gene targeting in mouse embryo-derived stem cells, Cell 51:503-512 (1987)
- _____ C69 Thomas et al., High frequency targeting of genes to specific sites in the mammalian genome, Cell 44:419-428 (1986)
- _____ C70 Uhlmann and Peyman, Antisense Oligonucleotides: A new therapeutic principle, Chemical Reviews 90:544-584 (1990)
- _____ C71 Weaver et al., A transgenic immunoglobulin Mu gene prevents rearrangement of endogenous genes, Cell 42:117-127 (1985)
- _____ C72 Yamamura et al., Cell-type-specific and regulated expression of a human $\lambda 1$ heavy-chain immunoglobulin gene in transgenic mice, Proc. Natl. Acad. Sci. USA 83:2152-2156 (1986)
- _____ C73 Yancopoulos and Alt, Regulation of the assembly and expression of variable-region genes, Ann. Rev. Immunol. 4:339-368 (1986)
- _____ C74 Yancopoulos and Alt, Developmentally controlled and tissue-specific expression of unrearranged V_H gene segments, Cell 40:271-281 (1985)
- _____ C75 Yasui et al., Class switch from μ to δ is mediated by homologous recombination between σ_μ and ϵ_μ sequences in human immunoglobulin gene loci, Eur. J. Immunol. 19:1399-1403 (1989)
- _____ C76 Zijlstra et al., Germ-line transmission of a disrupted β_2 -microglobulin gene produced by homologous recombination in embryonic stem cells, Nature 342:435-438 (1989)
- _____ C77 Zimmer and Gruss, Production of chimaeric mice containing embryonic stem (ES) cells carrying a homoeobox Hox 1.1 allele mutated by homologous recombination, Nature 338:150-153 (1989)

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FORM PTO-1449 (Modified)

Attorney Docket No.
14643-009000Serial No.
08/352,322LIST OF PATENTS AND PUBLICATIONS
FOR APPLICANT'S INFORMATION
DISCLOSURE STATEMENT
(Use Several Sheets if Necessary)Applicant
NILS LONBERG and ROBERT M. KAY

PAGE 10 OF 11

Filing Date
December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- _____ C78 Buttin, Exogenous Ig gene rearrangement in transgenic mice: a new strategy for human monoclonal antibody production? TIG - Vol 3, no. 8 (August 1987)
- _____ C79 Green et al., Antigen-specific human monoclonal antibodies from mice engineered with human Ig heavy and light chain YACs, Nature Genetics 7:13-21 (1994)
- _____ C80 Hofker et al., Complete physical map of the human immunoglobulin heavy chain constant region gene complex, Proc. Natl. Acad. Sci. USA 86:5567-5571 (1989)
- _____ C81 Humphries et al., A new human immunoglobulin V_H family preferentially rearranged in immature B-cell tumours, Nature 331:446-449 (1988)
- _____ C82 Jaenisch, Transgenic Animals, Science 240:1468-1474 (1988)
- _____ C83 Jakobovits et al., Analysis of homozygous mutant chimeric mice: Deletion of the immunoglobulin heavy-chain joining region blocks B-cell development and antibody production, Proc. Natl. Acad. Sci. USA 90:2551-2555 (1993)
- _____ C84 Lonberg et al., Antigen-specific human antibodies from mice comprising four distinct genetic modifications, Nature 368:856-859 (1994)
- _____ C85 Miller et al., Structural alterations in J regions of mouse immunoglobulin λ genes are associated with differential gene expression, Nature 295:428-430 (1982)
- _____ C86 Morrison, Success in specification, Nature 368:812-813 (1994)
- _____ C87 Pettersson et al., A second B cell-specific enhancer 3' of the immunoglobulin heavy-chain locus, Nature 344:165-168 (1990)

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PAGE 11 OF 11

Filing Date
December 7, 1994Group
1804OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

- _____ C88 Scangos and Bieberich, Gene transfer into mice, Advances in Genetics 24: 285-322 (1987)
- _____ C89 Stites et al., Basic & Clinical Immunology, page 50 (1984)
- _____ C90 Tanaka et al., An antisense oligonucleotide complementary to a sequence in I γ 2b Increase γ 2b germline transcripts, stimulates B cell DNA synthesis, and inhibits immunoglobulin secretion, The Journal of Experimental Medicine 175:597-607 (1992)
- _____ C91 Taki et al., Targeted insertion of a variable region gene into the immunoglobulin heavy chain locus, Science 262:1268-1271 (1993)
- _____ C92 Taylor et al., Human immunoglobulin transgenes undergo rearrangement, somatic mutation and class switching in mice that lack endogenous IgM, International Immunology 6:579-591 (1994)
- _____ C93 Vlasov et al., Arrest of immunoglobulin G mRNA translation in vitro with an alkylating antisense oligonucleotide derivative, Chemical Abstracts, page 28, 112:229433X (1990)
- _____ C94 Weiss, Mice making human-like antibodies, The Washington Post, April 28, 1994
- _____ C95 M. Neuberger (1996) Nature Biotechnology 14:826. Generating high-avidity human mabs in mice
- _____ C96 D. Fishwild et al. (1996) Nature Biotechnology 14:845. High-Avidity human IgGk monoclonal antibodies from a novel strain of minilocus transgenic mice

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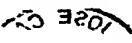
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FORM PTO-1449 (Modified)		Attorney Docket No. 014643-009020US		Serial No.: 08/728,463		
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Page 12 of 12		Applicant: Niels LONGBERG et al.				
		Filing Date: 10/10/96		Group: UNASSIGNED		
Reference Designation		U.S. PATENT DOCUMENTS				
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
FOREIGN PATENT DOCUMENTS						
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
___ C97	Chen et al. (1989) Arthritis Rheum. 32:72 Title: Characterization Of Two Immunoglobulin V _H Genes That Are Homologous To Human Rheumatoid Factors					
___ C98	Jonker et al. (1993) Clin. Exp. Immunol. 93:301-307 Title: In Vivo Treatment With A Monoclonal Chimeric Anti-CD4 Antibody Results In Prolonged Depletion Of Circulating CD4+ Cells in Chimpanzees					
___ C99	Knox et al. (1991) Blood 77:20 Title: Observations On The Effect Of Chimeric Anti-CD4 Monoclonal Antibody In Patients With Mycosis Fungoides					
___ C100	Powelson et al. (1994) Transplantation. 57:788-793 Title: CDR-Grafted OKT4A Monoclonal Antibody In Cynomolgus Renal Allograft Recipients					
___ C101	Tomlinson et al. (1992) J. Mol. Biol. 227:776 Title: The Repertoire Of Human Germline V _H Sequences Reveals About Fifty Groups of V _H Segments With Different Hypervariable Loops					
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Please stamp your date of receipt of the following documents and return to addressee:

Mailing Date:	March 9, 2001	First Class Mail	
File No.:	014643-009020us	Attorney:	ATS/ksj
Application No.:	08/728,463	Filed:	October 10, 1996
Inventor(s):	LONBERGet al.		MAR 29 2001
Title:	TRANSGENIC NON-HUMAN ANIMALS FOR PRODUCING HETEROLOGOUS ANTIBODIES		

References cited in the Information Disclosure Statement previously filed and referenced in the parent case, application no. 08/352,322

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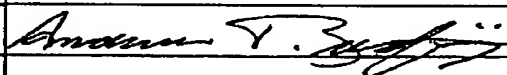
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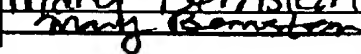
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TRANSMITTAL FORM (to be used for all correspondence after initial filing)		Application Number	08/728,463
		Filing Date	October 10, 1996
		First Named Inventor	Lonberg, Nils, et. al.
		Group Art Unit	1644
		Examiner Name	DeCloux, Amy
Total Number of Pages In This Submission	3	Attorney Docket Number	14843009020

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ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition Routing Slip (PTO/SB/69) and Accompanying Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): References cited in the Information Disclosure Statement previously filed and referenced in the parent case, application no. 08/352,322
Remarks		The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
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